REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Upon entry of this Amendment, claims 1-7 are pending in the application. Applicant respectfully

submits that the pending claims define patentable subject matter.

I.   Objection to the Drawings

The drawings are objected to because the Examiner maintains that Figures 1 and 2 should

be labeled "prior art". Along with this Amendment, Applicant submitting replacement drawings

wherein Figures 1 and 2 are labeled "prior art".

The drawings are further objected to because the Examiner contends that in Figure 3, "the

term "MODULATOR" (51, 52) is inconsistent with conventional terminology, does not perform

a complementary function to the demodulator (60), and apparently should be re-labeled as a

"CONVERTER", because the operation performed by the units (51, 52) apparently is a

conversion from a binary signal representing a bit (0/1) into an ideal symbol value (-1/+1) for the

bit." However, Applicant respectfully submits that the term "modulator" is technically correct

since the modulators 51 and 52 convert the estimated parity bit stream values (1,0) to estimated

parity symbol values (+1,-1) via binary phase shift keying (BPSK) which is commonly referred

to in the art as type of "modulation" (i.e., BPSK modulation).

The Examiner further objects to the drawings because the Examiner asserts that:

> the circuitry shown in the predecoder (100) of Fig. 3 is not adequate to operate as
> the predecoder (100) in the receiver arrangement of Fig. 4. The predecoder (100)
> of Fig. 3 is apparently only capable of usefully generating de-punctured parity
> symbols at its outputs, and so a pair of multiplexers for combining the de-

punctured parity symbols (L(yl k)^^, L(y2k)^^) from the recovery devices (31, 32) with non-punctured parity symbols (L(yl k), L(y2k)) from the demux (50), with appropriate multiplexing timing control, are apparently omitted. An external output to the turbo decoder (200) from the data symbol output (L(xk)) of the demux (50) is also apparently omitted.

Applicant respectfully submits that the Examiner's position is incorrect. The precoder 100 shown in Figures 3 and 4 is the same device and is operable to work with turbo decoder 200 whose structure is illustrated in Figure 2. The recovery devices 31 and 32 recover part or all of the punctured symbols of the parity symbol streams L(y1k) and L(y2k) based on the estimation values $Y1k^{\wedge\wedge}$ and $Y2k^{\wedge\wedge}$. That is, as long as the non-punctured bits of the parity bit streams $Y_{1k}^{\wedge}$ and $Y_{2k}^{\wedge}$ are determined to be identical with the estimation values $Y_{1k}^{\wedge\wedge}$ and $Y_{2k}^{\wedge\wedge}$ according to the comparison result from the comparators 20 and 21, the punctured bits of the parity symbol streams $L(y_{1k})$ and $L(y_{2k})$ are substituted by the modulated values of the estimation values $Y_{1k}^{\wedge\wedge}$ and $Y_{2k}^{\wedge\wedge}$, if not, the punctured bits are substituted by "0" thereafter.[1] Accordingly, the outputs $L(y_{lk})^{\wedge\wedge}$ and $L(y_{2k})^{\wedge\wedge}$ of recovery devices 31 and 32 include the punctured parity symbols.

Nonetheless, Applicant is submitting a replacement drawing for Figure 3 with an additional signal line for the data symbol stream $L(x_k)$ extending outside the pre-coder 100 (similar to that in Figure 4). Further, Figure 3 and the specification have been amended to change the reference number for demultiplexer from "50" to "70" since the modulation unit and the demultiplexer were both provided with the same reference number "50".

Accordingly, the Examiner is requested to remove the objection to the drawings.

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[1] See page 12, line 10 - page 14, line 2.

II. Objection to the Abstract and Specification

The abstract and specification are objected to because the Examiner contends that they should be amended to in accordance with the Examiner's proposed changes for the claims. By this Amendment, Applicant has amended the specification and abstract to improve clarity.

Accordingly, the Examiner is requested to remove the objection to the abstract and specification.

III. Rejection of claims 1-7 under 35 U.S.C. § 112, second paragraph

The Examiner asserts that the claims are indefinite and proposes amendments to the claim language. By this Amendment, Applicant has amended the claims to improve clarity. Accordingly, the Examiner is requested to remove the § 112, second paragraph, rejection.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Patent Application No. 09/939,604

The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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